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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/522,176	01/24/2005	Yoshihiro Hori	70456-071	3563
20277 7590 10/10/2008 MCDERMOTT WILL & EMERY LLP 600 13TH STREET, N.W. WASHINGTON, DC 20005-3096				
EXAMINER				
PHAM, HUNG Q				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/522,176

**Applicant(s)**

HORI ET AL.

**Examiner**

HUNG Q. PHAM

**Art Unit**

2169

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 January 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-8508)
- Paper No(s)/Mail Date 01/24/05
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

**Claims 1-7 and 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

As recited at lines 13-14 in claim 1, the limitation *storing the history information and being to be input/output* references to other items in the claim. It is unclear what item is being referenced.

As recited at lines 7-8, *the history information* is stored. As further recited at line 19, *the history information* is stored again by *the control portion*. It is unclear how the history information is stored a second time in the process.

As recited at line 8, the limitation *said classified data* references to other items in the claim. It is unclear what item is being referenced.

As recited at lines 12-14, each of items includes *identification information identifying the classified data*. As further recited at line 15, *the identification information identifying the classified data* is received. It is unclear what *identification information identifying the classified data* of what item is being referenced.

Regarding claims 2, 3, 4, 5, the limitation *the identification information identifying the classified data* references other items in the claims. It is unclear what item is being referenced.

Regarding claim 3, the limitation *the input processing* references other items in the claims. It is unclear what item is being referenced.

Regarding claim 5, the limitation *the output processing, said constant procedure by another device, said one additional item of the history information, the copied said history information, said received one additional item of the history information* reference other items in the claims. It is unclear what items are being referenced.

Regarding claim 6, the clause *the constant procedure* references other items in the claims. It is unclear what items are being referenced.

Regarding claim 7, the clauses *the sequence, the earliest information, the two items of the history information, the two regions arranged continuously* reference other items in the claims. It is unclear what items are being referenced.

Regarding claim 9, the clause *said two management numbers, the obtained two management numbers, the following region between said two continuous regions* references other items in the claims. It is unclear what items are being referenced. Moreover, the clause *the following region between said two continuous regions* is unclear. For example, if the regions are numbered 1-2-3-4-5-6, then 2-3 are two continuous regions and there is no region so called *the following region* that is *between said two continuous regions* 2-3.

**Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

**Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazaki et al. [USP 7,305,558 B1] in view of Koseki et al. [USP 6,732,124 B1] and Steiner et al. [USP 6,023,710].**

Regarding claim 1, Miyazaki teaches *a data storage device for performing input/output of classified data in accordance with a constant procedure, storing said classified data, and operating to store history information or update at appropriate timing said history information in accordance with said constant procedure* (FIG. 2), comprising:

*an interface performing external input/output of data* (Miyazaki, FIG. 2, INTERFACE 20);

*a data storage portion storing said plurality of classified data* (Miyazaki, Col. 5 Lines 27-31 and Col. 5 Line 55-Col. 6 Line 5 , messages such as electronic documents or digitized multimedia

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data with attached digital signature is considered as being equivalent to the claimed *classified data* are stored in *a data storage portion*, e.g., external storage device 13)The ;

*a log storage portion storing a plurality of items of the history information relating to the input/output of said classified data* (Miyazaki, FIG. 3, SIGNATURE LOG TABLE 2234, Col. 6 Line 67-Col. 7 Line 14 and Lines 33-67, when signature attached messages are transferring between digital signer side apparatus purchaser side apparatus, *plurality of items of the history information relating to the input/output of said classified data*, e.g., hash values of messages, signatures to messages and purchase names, are stored in *a log storage portion*, e.g., SIGNATURE LOG TABLE 2234); and

*a control portion controlling the input/output of said classified data* (Miyazaki, Col. 6 Line 67-Col. 7 Line 14),

wherein

*said log storage portion is provided as a ring buffer circulatively utilizing two or more regions each storing one item of said history information* (Miyazaki, FIG. 3, each entry or *region* of SIGNATURE LOG TABLE 2234 is stored *one item of said history information*, e.g., hash value of message, signature to message and purchase name),

*each of the plurality of items of said history information stored in said log storage portion includes identification information identifying the classified data storing the history information and being to be input/output* (Miyazaki, FIG. 3, SIGNATURE LOG TABLE 2234, each entry of SIGNATURE LOG TABLE 2234 includes *identification information identifying the classified data*, e.g., hash value), and

*said control portion receives the identification information identifying the classified data to be input/output in accordance with start of input/output processing of said classified data, determines the region storing the earliest item of the history information stored in said log storage portion as the earliest region, and newly stores the history information relating to the input/output processing of said classified data including said received identification information* (Miyazaki, Col. 11 Lines 56-67).

The missing of Miyazaki is the step of *searching a plurality of regions in said log storage portion in a predetermined order*, and storing the newly entry in *the determined earliest region*.

Koseki teaches *searching a plurality of regions in said log storage portion in a predetermined order* (Koseki, Col. 17 Lines 15-18).

Steiner teaches the technique of storing the newly entry in *the determined earliest region*. (Steiner, Col. 1 Lines 46-58).

Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to include the searching and storing technique as taught by Koseki and Steiner in order to determine the earliest entry of a log and reduce the processing time of writing new log entry.

Regarding claim 2, Miyazaki, Koseki and Steiner, in combination, teach all of the claimed subject matter as discussed above with respect to claim 1, Miyazaki further discloses *in history information output processing of outputting a part or the whole of the history information in response to an output request for the history information, said control portion receives via said interface the identification information of the classified data to be input/output, determines said earliest region as well as the region storing the latest history information including said received identification information as the latest region, and outputs a part or the whole of the history information stored in said latest region via said interface* (Miyazaki, Col. 17 Lines 22-56). Koseki further teaches the technique of *searching the plurality of regions in said log storage portion in accordance with a predetermined sequence* (Koseki, Col. 17 Lines 15-18).

Regarding claim 3, Miyazaki, Koseki and Steiner, in combination, teach all of the claimed subject matter as discussed above with respect to claim 1, Miyazaki further discloses *in the input processing of said classified data including outputting of the history information, said control portion receives the identification information of the classified data to be input/output via said interface, determines said earliest*

*region the latest region storing the latest history information including said received identification information, copies a part or the whole of the history information stored in the determined latest region into the determined earliest region to store the copied history information as new history information relating to the input processing of said classified data, and outputs a part or the whole of the history information stored in said determined earliest region via said interface* (Miyazaki, Col. 17 Lines 22-56). Koseki further teaches the technique of *searching the plurality of regions in said log storage portion in accordance with a predetermined sequence* (Koseki, Col. 17 Lines 15-18).

Regarding claim 4, Miyazaki, Koseki and Steiner, in combination, teach all of the claimed subject matter as discussed above with respect to claim 2, Miyazaki further discloses *in re-output processing of said classified data including inputting of one additional item of the history information recorded in accordance with progress of said constant procedure by another device, said control portion receives the identification information of the classified data to be input/output and said one additional item of the history information via said interface, determines said earliest region and said latest region, and determines whether said classified data is to output or not, based on the history information stored in the determined earliest region and said received one additional item of the history information* (Miyazaki, Col. 17 Lines 22-56).

Regarding claim 5, Miyazaki, Koseki and Steiner, in combination, teach all of the claimed subject matter as discussed above with respect to claim 2, Miyazaki further discloses *in the output processing of said classified data including inputting of one additional item of the history information recorded in accordance with progress of said constant procedure by another device, said control portion receives the identification information of the classified data to be input/output and said one additional item of the history information via said interface, determines said earliest region and said latest region, copies a part or the whole of the history information stored in the determined latest region into the determined earliest region to store the copied history information as the new history information relating to the output processing of said classified data, and determines whether said classified data is to output or not, based on the history information stored in said*

*determined earliest region and said received one additional item of the history information* (Col. 7 Lines 30-67 and Col. 11 Lines 55-67).

Regarding claim 6, Miyazaki, Koseki and Steiner, in combination, teach all of the claimed subject matter as discussed above with respect to claim 1, Miyazaki further discloses *after said earliest region is determined, said control portion updates at appropriate times the history information stored in said determined earliest region in accordance with progress of the constant procedure before end or interruption of the constant procedure in said input/output processing* (Col. 11 Lines 17-67).

Regarding claim 7, Miyazaki, Koseki and Steiner, in combination, teach all of the claimed subject matter as discussed above with respect to claim 1, Miyazaki further discloses *each of the plurality of items of said history information further includes a management number for identifying the sequence stored in said log storage portion, and said earliest region storing the earliest information is detected based on the management numbers respectively included in the two items of the history information stored in the two regions arranged continuously in said log storage portion* (Col. 11 Lines 17-67).

Regarding claim 8, Miyazaki, Koseki and Steiner, in combination, teach all of the claimed subject matter as discussed above with respect to claim 7, Miyazaki further discloses *said log storage portion is formed of a ring buffer circulatorily utilizing regions of  $N$  ( $N$  is a natural number larger than one) in number, and said management number is in a residue system of  $M$  ( $M$  is a natural number satisfying ( $N < M$ ))* (FIG. 3 and Col. 11 Lines 17-67).

Regarding claim 9, Miyazaki, Koseki and Steiner, in combination, teach all of the claimed subject matter as discussed above with respect to claim 8, Miyazaki further discloses *said control portion obtains each of the management numbers respectively included in the two items of the history*

*information store in the two regions arranged continuously in the log storage portion, determines whether the two items of the history information including said two management numbers are stored continuously or not, based on a difference between the obtained two management numbers, and detects the following region between said two continuous regions as said earliest region when the two items of the history information are discontinuously stored (FIG. 3 and Col. 11 Lines 17-67).*

### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HUNG Q. PHAM whose telephone number is 571-272-4040. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JAMES K. TRUJILLO can be reached on 571-272-3677. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/HUNG Q. PHAM/  
Primary Examiner  
Art Unit 2169

October 08, 2008

